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Date: June 21, 2022

To: Transportation, Energy, and Utilities Committee

From: Chapin Spencer, Director Public Works
Lee Perry, Assistant Director – Fleet Maintenance Division
Ashley Parker, Capital Program Director

Subject: FY23 Vehicle Purchase Recommendation

BACKGROUND:

The City's interdepartmental Fleet Committee, staffed by the Department of Public Works (DPW) Fleet Maintenance Manager Dave Hammond, coordinates fleet purchases for the General Fund and several enterprise/special revenue funds in order to realize cost savings and provide management oversight. The Fleet Committee has identified 19 vehicles/equipment to be replaced in FY23, including (12) General Fund pieces of equipment and (7) enterprise/special revenue vehicles. The Fleet Committee had to significantly reduce the amount of vehicles/equipment to be replaced in FY23 due to the limited funding available. Contributing financial factors include the proposed FY'23 General Fund tax increase not passing, the

original \$40M fall 2021 bond proposal not passing, and existing debt payments from fleet purchases in prior years. The \$23.8M bond approved on Town Meeting Day in 2022 only included replacement of three fire trucks.

As per the City of Burlington Fleet Policy, the Fleet Maintenance Manager and the Maintenance Division Director met with each Department Head to review the recommended FY23 replacements and receive input on upcoming vehicle/equipment needs. With that information, the Fleet Maintenance Manager researched electric and hybrid options for each item, calculated the carbon pricing on fossil fuel options, and made his recommendations to the Fleet Committee. Department representatives and BED subsequently reviewed these recommendations. BED provided further recommendations and available incentives resulting in further refinement of the recommendations before you. The proposed equipment list was reviewed by the Fleet Committee, relevant departments, BED, and the Administration. The Fleet Manager and the Fleet Committee worked hard to balance two key policy goals – the City’s 2030 Net Zero energy goal and the City’s operations and safety goal to replace as much of the fleet that is at end of life as possible. We are now seeking the TEUC to recommend this FY’23 fleet list to the Board of Finance and City Council.

History of Burlington’s Fleet Purchasing Strategy:

Below is a brief timeline of how the purchasing strategies for the City’s fleet have changed over time. It provides the framework for understanding how the past has shaped the present and may provide guidance for helping us determine a new strategy focused on long-term sustainability.

- FY12 – FY15: There was a moratorium on the purchase of new vehicles due to the City’s financial challenges.
- FY16: The City began to purchase new vehicles again – this time utilizing a master lease. At this time, an informal fleet team started creating a list of vehicles needed each year to help the City forecast needs over time.
- FY17: A Sustainable Infrastructure bond replaced three fire trucks for \$3.3 million.
- FY17 – FY18: The fleet team began creating a spreadsheet to track sustainable investment in fleet. The strategy of using master leases was working, but projections were showing financial challenges for fleet funding in out years due to increased debt payments.
- FY18: The City contracted with a fleet consultant to review how fleet was structured and recommend improvements. This resulted in a new Fleet Policy, the Fleet Committee, and a spreadsheet of needs from the consultant.
- October 24, 2019: The Fleet Policy was approved by the City Council.
- FY20: The Fleet team estimated that the sustainable fleet replacement need was approximately \$2,700,000/year. Up to this point, fleet funding had been by department. As part of the Fleet Committee and Fleet Policy development, all fleet related resources were pooled across departments into one location in order to create efficiencies in purchasing and revenues.

Over the last several fiscal years, through effective coordination and purchasing vehicles through master leases, the City was able to make significant reinvestments in its municipal fleet. Now the City is entering a very challenging multi-year fiscal year period for multiple reasons:

- As discussed above, vehicle replacement funding was pooled from Police, Public Works and Parks starting in FY20. However, not all revenues from pooling vehicle replacement funding from Police,

Fire, Public Works and Parks were able to be kept each fiscal year for fleet needs due to shortfalls in General Fund operating budgets.

- Several recent revenue ballot items were not successful at the ballot box (FY'23 proposed municipal tax increase and the Fall 2021 \$40M capital bond proposal).
- After multiple years of financing to purchase new vehicles, the City is now carrying significant debt service payments for vehicles previously received.
- Vehicle industry constraints described below.

Current Industry Constraints:

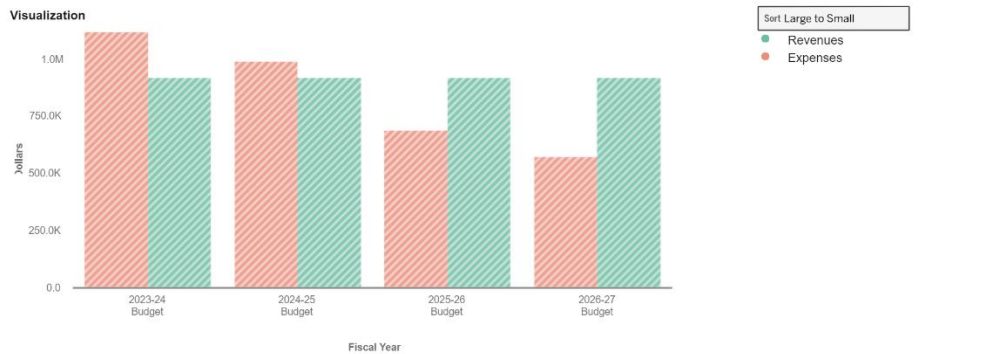
As TEUC members likely know, there are many current challenges and constraints within the industry for ordering/purchasing Fleet vehicles and equipment. Until just recently, the ability for governments or municipalities to order fleet vehicles from vendors was frequently not possible. The only vehicles available to purchase were “on the lot” at manufacturers’ suggested retail pricing, and vehicles were not often specific to our current needs. This changed in the early part of June. We are now able to order vehicles through our Fleet rate with vendors that support this program. This will make it possible to order vehicles that remain from our FY22 approved replacement list that were previously canceled due to supply issues.

Another issue is the ability to have vehicles built in a reasonable amount of time. Delivery periods of two years or more is not uncommon – especially for EVs. For example, Burlington Electric ordered an EV bucket truck in August of 2021 and delivery is not expected until sometime in 2023. DPW has experienced similar issues with some of the vehicles ordered for FY22 replacement. After ordering a Recycling Truck and Plow Truck in July 2021, DPW has just received notice of an expected build date of October 2022 with a delivery date sometime in 2023. Ford is indicating a waiting period for the EV Lightning pickup truck of 2-3 years due to supply chain issues. DPW cannot wait this long on a replacement for vehicles failing now. The two vehicles that were to be replaced with the Ford Lightning will be replaced by a vehicle that will be smaller in size and more fuel efficient than the vehicle it is replacing.

Current Financial Constraints:

As a result of the current Fleet Strategy, revenues from other GF Departments that were not received, additional vehicle purchases, and paying a premium for EV vehicles over conventional fossil fuel models, there are no funds going forward after FY23 to purchase Fleet vehicles for General Fund Departments. The capital forecast for fleet over the next four years also shows that, with no additional leases, there will be a shortfall in FY24 and FY25, with money to spend on a lease again in FY26.

Fleet Forecast Test



Collapse All	2023-24 Budget	2024-25 Budget	2025-26 Budget	2026-27 Budget
▼ Revenues	\$ 921,000	\$ 921,000	\$ 921,000	\$ 921,000
▼ Interfund Transfer Proceeds	871,000	871,000	856,917	574,919
Interfund Transfer Proceeds General Fund	871,000	871,000	856,917	574,919
► Use of Fund Balance	0	0	14,083	296,081
► Gain/Loss On Asset	50,000	50,000	50,000	50,000
▼ Expenses	1,118,824	994,352	691,925	574,920
► Capital Leases	1,000,859	888,155	595,511	485,561
► Interfund Transfer	76,360	76,360	76,360	76,360
► Capital Lease Interest	41,605	29,837	20,054	12,999
Revenues Less Expenses	\$ -197,824	\$ -73,352	\$ 229,075	\$ 346,080

Data filtered by Types, Fleet, NO SUB-PROGRAM and exported on June 16, 2022. Created with OpenGov

The average amount of funds needed on an annual basis for a sustainable fleet, is ~\$2.7M. The projected forecast is concerning as it will defer General Fund vehicles that will be beyond their replacement dates adding to the already growing deferred vehicle list seen below. Currently vehicles that were deferred in FY22, and FY23 make up 15% of the General Fund Fleet. Forecasting out through FY26, the total percent of vehicles in the Genral Fund Fleet past their replacement date, would be 47%. This is based on a total of 203 wheeled, powered vehicles/equipment.

As referenced above, the electric, and hybrid vehicles/equipment, purchased as replacements bore an additional cost on the General Fund compared to the purchase price of conventional vehicles/equipment. From FY20 through FY22, the total cost paid for EV/Hybrid over conventional was \$202,900, with some of the more expensive equipment being the electric mowers, a Zamboni, and a forklift.

Given the significant financial constraints facing the City's municipal fleet, the Clerk Treasurers Office was able to identify ~\$500,000 that may be used for General Fund Departments that have vehicles/equipment in urgent need of replacement. The list of the replacement vehicles can be found in Attachment A. Wherever possible, and feasible, the Fleet Committee will replace gas and diesel vehicles/equipment with hybrid or electric power. This additional funding for vehicle and equipment purchases will come from the Vehicle Reserve Unassigned Fund Balance. While this additional funding is helpful, utilizing this funding source to support FY23 needs will fully deplete the fund balance and create an even more challenging financing scenario in the subsequent fiscal years.

There may be some additional funding opportunities through a State grant program to assist in the costs associated with EV charging stations – but likely not vehicles. At this time, the State has not developed this program further to describe who could apply for funding or how this funding could be used. It is possible that there may be some funding available to municipalities looking to upgrade their fleets in ways that could also assist the surrounding community. Fleet will continue to work with other staff to identify

additional funding opportunities that could help offset some of the pending fleet costs, acknowledging that grant funding often requires a local match and tends not to cover the full amount.

Fleet Strategies for the Future:

DPW Fleet is also looking forward in our Fleet replacement schedule to see what vehicles/equipment are candidates to be replaced by an EV. DPW Fleet is exploring the option of placing an order now, anticipating the timing of manufacturing of the EV to coincide with the replacement schedule of the vehicle to be replaced, but as of this time we are not able to place an order. If the situation arises where the manufacturing date is earlier than the replacement date, DPW Fleet will look into selling the vehicle to replace with the EV. If this strategy does not prove to be financially viable due to constraints, then vehicles that need replacing, will be replaced with the type of vehicle that makes the most sense economically.

FY23 Deferred Equipment					
Department	Equip. #	Description	Year	Vehicle	Cost To Replace
Fire	FB1	Shift Command	2018	Suburban	\$60,000.00
Police	P135	Range Trailer	2001	Trailer	\$9,000.00
Police	P1507	Detective	2015	Taurus	\$42,000.00
Police	P1701	Line Cruiser	2017	Explorer	\$80,000.00
Police	P1702	Line Cruiser	2017	Explorer	\$80,000.00
Police	P1703	Line Cruiser	2017	Explorer	\$80,000.00
Police	P1704	Line Cruiser	2017	Explorer	\$80,000.00
Police	P1804	Line Cruiser	2018	Explorer	\$80,000.00
Police	P1805	Line Cruiser	2018	Explorer	\$80,000.00
Parks	PR1459	Tractor	2000	John Deere 1450	\$40,000.00
Parks	PR53	Trailer	2001	Mid-Atlantic	\$9,600.00
Parks	PR670	Tractor	2000	John Deere 670	\$30,000.00
Parks	PRCHIP14	Chipper	2014	Brush Bandit	\$57,247.00
Streets	S30	Dirt Screen	2009	SCM-40	\$50,000.00
Streets	S53	Utility Trailer	1997	Custom	\$9,600.00
Streets	S57	Utility Trailer	2008	Sure Trac	\$10,184.00
Streets	S70	Dump Truck	2002	International	\$76,000.00
Totals	17				\$873,631.00

City's NetZero by 2030 Goal – Fleet Update:

DPW Fleet has worked to advance the electrification of the fleet where applicable. This is based on the Departments needs of the vehicle being purchased, and whether the EV technology can support those needs. The progression of the electrification of our fleet can be seen in Attachment B. It is important to note, that if there are no funds allotted for vehicle replacement in the coming fiscal years, there will be no fleet purchases until FY26.

The Fleet Manager has also reached out to various vendors inquiring about the technology available for some of our larger fleet equipment, such as CR Woods, the Volvo heavy equipment dealer. The vendor will be acquiring a small, fully electric bucket loader this coming fall. DPW Fleet will schedule a demo to see if it can fulfill our needs when our current similar size loader is scheduled for replacement. The Fleet Manager has also reached out to Mac Trucks, Peterbuilt, and Lyon electric to see where their technology is at in regard to electric recycling trucks. When available in our area, we look forward to scheduling a demo of the recycling truck as well, to see if it will meet our needs, and demands of our recycling program.

FY23 Replaced Vehicles:

This is a list of vehicles we are proposing to replace and per City Ordinance we need to provide the Council this information prior to disposing of these assets.

FY23 Replaced Vehicles

Year	Make	Model	Auction/Trade	Estimated Value
2002	International	Dump Truck	N/A	\$8,000
2013	International	Bucket Truck	N/A	\$30,000
1992	International	Bucket Truck	N/A	\$8,000
2008	International	Plow Truck	N/A	\$12,000
2011	Ford	F250 4X4	Auction	\$5,000
2008	Ford	F350 Utility/Plow	Auction	\$5,000
2003	Ford	E350 Cube Van	Auction	\$5,000
2015	Ford	F550 Service Truck	Auction	\$8,000
2011	E-One	Pumper Truck	Auction	\$20,000
2011	E-One	Ladder Truck	Auction	\$40,000
2003	E-One	Pumper Truck	Auction	\$6,000
2012	Autocar	Recycling Truck	Auction	\$8,000
2013	Dodge	3500 Service/Vac	Auction	\$8,000
2011	Chevy	1500 Pickup	Auction	\$5,000
2011	Trackless	Sidewalk Tractor	Auction	\$8,000
1980	John Deere	950 Tractor	Auction	\$1,000
2000	McConnell	Flail Mower	Auction	\$200
N/A	Bobcat	Mower	Auction	\$200

In Summary:

The Fleet team is looking to gain support from the TEUC and the City Council to develop a long-term fleet purchasing strategy that ensures the sustainability of all existing vehicles/equipment in Fleet, as well as one that brings the City closer to reaching its NetZero 2030 goals. We have reached a pivotal moment in the long-term planning of the City's fleet, where decisions on how the City funds future fleet purchases will shape its ability to continue providing the level of service required by its residents. It will also provide a more solid road map for how Fleet can meet its portion of the City's overall NetZero 2030 goals.

Suggested Motion:

Recommend the Board of Finance and City Council approve the proposed FY'23 Fleet Purchasing List.

ATTACHMENT A: - FY 23 FLEET CAPITAL SUMMARY

Department	Division	Vehicle ID	Vehicle	Recommendation	Replacement Interval	Lease Duration Years	Funds From Bond	Funds From Campground	Funds From Greenbelt	Vehicle Units	Equipment Implement	Cost of Carbon		Total Cost			
												Fossil Fuel	Hybrid/CNG	Fossil Fuel	Hybrid/CNG(after rebates)	Electric	Rebate
Fire	Fire	FE3	Pumper Truck	Fossil Fuel	12		1			1		\$15,648		\$656,000			
Fire	Fire	FL4	Ladder Truck	Fossil Fuel	12		1			1		\$12,569		\$988,000			
Fire	Fire	FE6	Pumper Truck	Fossil Fuel	12		1			1		\$10,212		\$656,000			
Parks	Cemetery	Bobcat	Walk Behind Mower	Fossil Fuel	10	7				1		\$1,157		\$7,000			
Parks	Rec/Waterfront	PRFLAIL	Flail Mower	N/A		7				1	\$43,200.00	NA					
Parks	Rec/Waterfront	PR39	EV Low speed Vehicle	Electric	10	7				1		\$1,550				\$30,000	N/A
Parks	Campground	UTV	UTV	Electric				2		2		\$3,100				\$40,000	N/A
Parks	Rec/Waterfront	PR08	Bucket Truck	Fossil Fuel	15			1		1		\$14,150		\$219,800			
DPW	Streets	S49	Sidewalk Tractor	Fossil Fuel	8	7				1		\$2,093		\$193,500			
DPW	Streets	S75	Plow Truck	Fossil Fuel	12	7				1		\$14,297		\$201,825			
DPW	Recycling	G02	Recycling Truck	Fossil Fuel	7	7				1		\$38,822	\$30,408	\$264,000	\$357,525		
Traffic	Traffic	T02	F350 One Ton	Fossil Fuel	10	7				1		\$6,678		\$86,100			
Traffic	Traffic/Signals	T05	Bucket Truck	Fossil Fuel	15	7				1		\$6,939		\$373,500			
Water	Water Distribution	201	Van	Fossil Fuel	10	7				1		\$1,542		\$45,000			
Water	Water Distribution	213	One Ton W/ Vac Unit	Fossil Fuel	10	7				1		\$7,754		\$57,000			
Water	Water Distribution	Z312	Service Truck	Fossil Fuel	10	7				1		\$10,339		\$66,900			
Water	Water Distribution	Z18	Pick Up Truck	Hybrid	10	7				1		\$2,423	\$1,047	\$40,000	\$23,000	Not Available to order	
Water	Water Distribution	New	Low Speed EV	EV	10	7				1		\$2,026		\$20,000		\$30,000.00	N/A
Total				\$1,164,025						19	\$43,200.00	\$151,299	\$31,455	\$475,525	\$380,525	\$100,000	

Lease	FY23 Lease Budget		Value	Number of Leases
5-Year GF	\$0			0
7-Year GF	\$71,329		\$475,525	6
Total Lease Payments	\$71,329		\$475,525	6
Traffic	\$68,940.00	7 year	\$459,600	2
Water Resources	\$34,335.00	7 year	\$228,900	5
GF Equipment	\$71,329	7 year		
Total	\$245,993		\$1,164,025	

ATTACHMENT B: - PROGRESSION OF FLEET ELECTRIFICATION

Vehicle/Equipment Type	FY19	FY20	FY21	FY22	FY23	AVG	TOTAL
ELECTRIC	0	1	6	7	4	3.6	14
HYBRID	5	3	4	6	1	3.8	18
TOTAL FLEET PURCHASE	13	16	28	24	18	19.8	81
% OF EV	0%	6%	21%	29%	22%	18%	17%
% OF HYBRID	38%	19%	14%	25%	6%	20%	22%

*Note: FY23 vehicle list has a total of 19 vehicles/equipment to be replaced. Please see Attachment A for list of specific vehicles/equipment, and their fuel source.